

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Please amend the specification by inserting as the first line in the specification the sentence:

"This application is a divisional application of serial no. 10/115,825 now U.S. Pat. 7,161,771."

An Examiner's amendment was requested with respect to the claims on April 10, 2008. Authorization for this examiner's amendment was given in a telephone interview with Ronald Feece on April 10, 2008.

The application has been amended as follows:

Claim 38 change "36" to "24" so that it depends from independent claim 24.

Claim 39 change "36" to "24" so that it depends from independent claim 24.

The following is an examiner's statement of reasons for allowance:.

Claims 24-26 and 37-41 are allowable over the prior art of record because the prior art of record does not teach sputter depositing the multilayer dual SV sensor including a first spin valve (SV) stack, a second spin valve (SV) stack and a longitudinal bias stack disposed between the first and second SV stacks the first spin valve stack including a first magnetic free layer, and the second spin valve stack including a second magnetic free layer, wherein the depositing a longitudinal bias stack further comprises

Art Unit: 1795

depositing a first decoupling layer adjacent to the first magnetic free layer, depositing a first ferromagnetic layer, depositing a layer of antiferromagnetic material, depositing a second ferromagnetic layer and depositing a second decoupling layer, the first decoupling layer being deposited to such a thickness to magnetostatically couple the first ferromagnetic free layer and the first magnetic free layer and sufficiently thick to avoid exchange coupling the first ferromagnetic layer with the first magnetic free layer; the second decoupling layer being deposited to such a thickness to magnetostatically couple the second ferromagnetic layer and the second magnetic free layer and sufficiently thick to avoid exchange coupling the second ferromagnetic layer with the second magnetic free layer and annealing the dual spin valve sensor in two steps as required by the claims.

The closest prior art of record to Mouchot et al. (U.S. Pat. 5,635,835), Huai et al. (U.S. Pat. 6,381,105), Nakada et al. (U.S. Pat. 6,341,053) and Saito et al. (U.S. Pat. 6,590,803) fail to teach the claimed sputter deposition of the structure recited, the annealing of the claimed sputter deposition structure and the function of the decoupling layers. Gill (U.S. Pat. 6,275,363) also fails to teach the claimed sputter deposition of the structure recited, the claimed annealing of the claimed sputter deposition structure and the function of the decoupling layers. Gill for instance fails to teach utilizing the free magnetic layers in the first and second spin valves in conjunction with the longitudinal bias layers. Since the prior art does not teach the claimed sputter deposited layers, the two step anneal of the claimed sputter deposited layers and the function of the decoupling layers as claimed the claimed invention is unobvious.

It should be noted that the co-pending application to 10/981,926 fails to claim the utilization of two magnetic free layers in two spin valve structures in combination with the longitudinal bias layers as recited in the claims of this application. In any case Applicant's terminal disclaimer has been approved and accepted.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney G. McDonald whose telephone number is 571-272-1340. The examiner can normally be reached on M-Th with every Friday off..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam X. Nguyen can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1795

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Rodney G. McDonald/
Primary Examiner, Art Unit 1795

Rodney G. McDonald
Primary Examiner
Art Unit 1795

RM
April 10, 2008